

8.15.4 Procedure for a Functional Test of the Chipmunk-Computer Interface

1. **Purpose**

This procedure provides instructions for Access Controls Group (ACG), Radiological Control Technicians (RCT), and C-A MCR Operators, for functionally testing the computer software, which interfaces remote Chipmunk measurements with visual and audible alarms and dose rate histograms on display in the Main Control Room.

2. **Responsibilities**

- 2.1 The ACG is responsible for ensuring this procedure is complete prior to operation of any chipmunk, which alarms in the C-A Main Control Room.
- 2.2 MCR Operators are responsible for assisting in the computer interface test.
- 2.3 The technicians in the Radiological Controls Division (RCD) at the C-A are responsible for performing the functional test with a radiation check source.
- 2.4 The C-A Controls Group is responsible for correcting software in response to a test failure.

3. **Prerequisites**

- 3.1 The ACG shall ensure that the correct Chipmunk Installation Form is complete ([C-A-OPM-ATT 8.15.3](#), Attachment 8.2), or the chipmunk is listed in the current Chipmunk Re-verification Checklist, [C-A-OPM-ATT 8.15.4.c](#).
- 3.2 The RCT handling the source shall be wearing a Thermoluminescent Dosimeter (TLD) badge.
- 3.3 Minimum of two trained and qualified person(s): One RCT and one ACG technician.

4. **Precautions**

None

5. **Procedure**

- 5.1 When the ACG Leader, or designee, is aware that the Chipmunk-computer interface test is imminent, he/she shall ensure notification of the following personnel:
 - 5.1.1 The C-A MCR Operations Coordinator if the C-A is running,
 - 5.1.2 The C-A Access Controls Group Leader, or designee, and
 - 5.1.3 The C-A RCD Representative, RCT Supervisor, or designee(s).

- 5.2 Use the RCD source currently approved for Chipmunk functional testing (IE&C #1).
- 5.3 Station one person in the C-A Main Control Room to obtain measurement data from the scaler readback.
- 5.4 Station another person at the Chipmunk and place the source on top of the Chipmunk detector box, the white portion, just under the right handle bracket.
- 5.5 Count the Chipmunk output for 1 minute and observe 166 ± 33 counts ($\pm 20\%$) in accordance with [C-A-OPM-ATT 8.15.4.b](#).
- 5.6 Ensure the dose rate reading on the Chipmunk meter face falls within acceptable range as given in [C-A-OPM-ATT 8.15.4.b](#).
- 5.7 Ensure that the dose rate as observed on the Chipmunk Viewer Histogram plot in the C-A MCR also falls within the acceptable range as shown in [C-A-OPM-ATT 8.15.4.b](#).
- 5.8 For non-interlocking chipmunks only: disconnect the output BNC to simulate a loss of power.
 - 5.8.1 wait approximately 10 minutes and observe a "Fail" indication on the SPREADSHEET display. Log counts on Alarm Display.
- 5.9 Record steps 5.5, 5.6, 5.7, and 5.8 on [C-A-OPM-ATT 8.15.4.a](#).

6. **Documentation**

- 6.1 The RCT and the instrumentation technician performing the computer interface test shall complete and sign the Chipmunk Computer Interface Test Sheet, [C-A-OPM-ATT 8.15.4.a](#).
- 6.2 The RCD shall maintain the completed interface test sheets; ACG will maintain a copy.
- 6.3 Copies of the Chipmunk Installation Report shall be distributed by ACG, as appropriate.
 - 6.3.1 For new installations only, copies to:

C-A MCR Chipmunk Installation Notebook
RCD HP Office
Access Controls Group
Radiation Safety Committee

7. **References**

7.1 [C-A-OPM-ATT 8.15.3, "Chipmunk Radiation Monitors".](#)

8. **Attachments**

8.1 [C-A-OPM-ATT 8.15.4.a, "Chipmunk Computer Interface Test Sheet, C-A CIF 90-03".](#)

8.2 [C-A-OPM-ATT 8.15.4.b, "Decay Chart for Health Physics Chipmunk Test Source IE&C#1".](#)

8.3 [C-A-OPM-ATT 8.15.4.c, "Chipmunk Re-verification Check List".](#)